

## ABSTRACT OF THE DISCLOSURE

A projection-type rotary encoder is provided which has a light source, an object grating plate in which a substantially fan-shaped object grating for transmitting light is arranged at constant angular intervals in the circumferential direction, a rotary scale plate in which a substantially fan-shaped scale grating for transmitting light is arranged at constant angular intervals in the circumferential direction, and a photodiode grating plate in which a substantially fan-shaped photodiode photosensitive surface grating is arranged at constant angular intervals in the circumferential direction. A scale grating 32A is formed in the rotary scale plate with a shape and size that correspond to a light image of the object grating 31A incident on the surface thereof. A photodiode photosensitive surface grating 33A is formed in the photodiode grating plate with a shape and size that correspond to a light image of the scale grating 32A incident on the surface thereof.